

**Marking Scheme**

**Transformation of Graphs**

**Name --------------------------------**

**Answers**

**Question 1**

$\left(180,4\right)$



**Question 2**





**Question 3**





**Question 4**

$\left(3,-1\right)$



**Question 5**

$\left(-2,-\frac{1}{2}\right)$



**Question 6**

$b=90$, $c=1$



**Question 7**

$\left(0,-1\right)$



**Question 8**

 $\left(x-4\right)^{2}+9$



**Question 9**

$\left(4,9\right)$



**Question 10**



**Question 11**

$\left(4,24\right)$



**Question 12**

"-2 OR - 2 OR minus 2 OR take 2 OR take away 2 OR subtract 2" and "y"



**Question 13**

$\left(0,5\right)$



**Question 14**

$\left(3,10\right)$



**Question 15**

$\left(1,5\right)$



**Question 16**



**Question 17**

$\left(3,-1\right)$



**Question 18**

$\left(1.5,-4\right)$



**Question 19**

$\left(-3,-4\right)$



**Question 20**

$\left(5,-4\right)$



**Question 21**

$\left(-2,2\right)$



**Question 22**

|  |  |
| --- | --- |
| Equation  | Graph  |
| $$y=2 sin x$$ | **C**  |
| $$y=- sin x$$ | **D**  |
| $$y= sin 2x$$ | **A**  |
| $$y= sin x+2$$ | **F**  |
| $$y= sin \frac{1}{2}x$$ | **B**  |
| $$y=-2 sin x$$ | **E**  |



**Question 23**

$\left(0,5\right)$



**Question 24**

$\left(3,10\right)$



**Question 25**

$\left(1,5\right)$



**Question 26**



**Question 27**

$\left(180,0\right)$



**Question 28**

$\left(270,-1\right)$



**Question 29**

$a=2$, $b=3$, $c=1$



**Question 30**

$y=f\left(x-5\right)$



**Question 31**

$\left(4,3\right)$



**Question 32**

$y=f\left(x-4\right)$



**Question 33**

$\left(4,3\right)$



**Question 34**

$\left(2,6\right)$



**Question 35**

"translation"



**Question 36**

$y=f\left(-x\right)$



**Question 37**

$\left(1,-1\right)$



**Question 38**

$\left(2,-3\right)$



**Question 39**

$f\left(x\right)=\left(x-2\right)^{2}-4$



**Question 40**

$\left(1,-4\right)$



**Question 41**

$\left(2,4\right)$



**Question 42**

$\left(2,-9\right)$



**Question 43**

$\left(5,-4\right)$



**Question 44**

$y=\left(x-2\right)^{2}$



**Question 45**

$\left(90,1\right)$



**Question 46**

$\left(90,4\right)$



**Question 47**

$$k=2\sqrt{3}$$



**Question 48**

$x=$ 120 $ ^{°}$



**Question 49**

$\left(1,3\right)$



**Question 50**

$y=f\left(-x\right)$



**Question 51**

$y=g\left(x\right)+1$



**Question 52**

$\left(180,-1\right)$



**Question 53**

It crosses the $x$-axis first at $x=$ 1 and and at $x=$ 2 and It crosses the $y$-axis at $y=$ 2